

A Gendered Approach to Understanding Self-Control and Impulsivity: Gender Differences, Gender Role Traits, and Gender Role Attitudes

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Abstract

Although gender differences in self-control and impulsivity have been well established, limited research has examined how gender roles are related to gender differences in self-control and impulsivity. We conducted two studies to test the hypothesis that gender role traits and attitudes will be able to account for gender differences in self-control, impulsivity, and impulsive behaviors. In Study 1 ($n = 491$), gender and gender role traits were used to predict self-control, impulsivity, restraint, and snooping in a romantic relationship. In Study 2 ($n = 463$), we added gender role attitudes to predict self-control, impulsivity, restraint, and drinking on top of gender and gender role traits. Findings across the two studies showed (1) a solid, replicable gender difference in impulsivity and a lesser gender difference in self-control but no significant gender difference in restraint; (2) masculine traits and attitudes but not feminine ones accounted for the gender difference in impulsivity; and (3) trait masculinity fully accounted for the gender differences in snooping and drinking. Additionally, Study 2 showed that gender role attitudes but not gender role traits accounted for the gender difference in self-control. These findings suggest that gender role traits and attitudes all make important but different contributions to the gender differences in self-control, impulsivity, and impulsive behaviors.

Keywords

Gender Roles, Gender, Self-Control, Masculinity, Femininity, Impulsivity

1. Introduction

Self-control is considered the “operating” phase of the broader self-regulation

process and focuses on one's controlled behavioral responses to the environment according to one's goals (Carver & Scheier, 1982). Self-control includes two seemingly opposite but distinct components: *impulsivity*—the propensity to be spontaneous and act on intuition, and *restraint*—the tendency to be deliberative and engage in effortful control (Carver, 2005; Maloney et al., 2012).

Self-control has drawn significant attention in the past few decades as it has been linked to many positive outcomes such as success in academia and careers, better health, and more fulfilling relationships (e.g., Tangney et al., 2004), whereas a lack of self-control is suggested to be a primary cause for maladaptive behaviors such as delinquency, antisocial behaviors, and criminal activity (e.g., Gottfredson & Hirsch, 1990). Moreover, previous research has suggested consistent, significant gender differences in self-control. Namely, compared to females, males tend to report significantly lower self-control and restraint (e.g., Gibson et al., 2010; Nofziger, 2010) while display higher levels of impulsivity (see a meta-analysis by Cross et al., 2011). These gender differences in self-control and impulsivity have been found to emerge in early childhood (e.g., Chapple & Johnson, 2007) and persist through adolescence and adulthood (e.g., Nofziger, 2010; Tetering et al., 2020). A similar pattern of gender differences in self-control and impulsivity has also been observed in Eastern cultures (e.g., Cheung & Cheung, 2010; Chui & Chan, 2016).

While there is no overwhelming consensus on the etiology of the gender differences observed in self-control related constructs and behaviors, gender roles have been suggested as a potential explanation (Gottfredson & Hirsch, 1990; Hagan et al., 1988). Namely, the reason that males show less self-control and constraint but more impulsivity than females may be due to the different gender roles adopted by men and women. While some studies have yielded findings that are in line with this reasoning, little research has explicitly tested whether gender roles can account for the gender differences in self-control constructs. The few studies that did examine the links between gender, gender roles, and self-control or impulsivity have only examined gender role traits or gender role norms in isolation. The current study has two major aims: First, we seek to replicate the reported gender difference in the trait measure of self-control and its components—impulsivity and constraint (Study 1 and Study 2) as well as two impulsive behaviors—snooping on one's romantic partner (Study 1) and drinking (Study 2). Second, we aim to clarify the degree to which gender role traits (Study 1 and Study 2) and gender role attitudes (Study 2) account for the gender differences that may exist in the trait of self-control and the two impulsive behaviors.

1.1. Gender, Gender Roles, and Self-Control

According to Gottfredson and Hirsch's (1990) *general theory of crime*, low self-control is a key trait that separates criminals from non-criminals. The researchers further suggested that self-control is developed through early childhood socialization and remains stable throughout one's life course. Consistent with this theory, girls frequently exhibit higher levels of self-control and lower levels of impulsivity regardless of the type of data collected or the age studied (e.g., Chapple &

Johnson, 2007; Chui & Chan, 2016; Mason & Windle, 2002; Tetering et al., 2020). Moreover, gender differences in self-control and impulsivity are able to at least partially account for the gender differences repeatedly observed in delinquency and criminal activity (e.g., Nofziger, 2010).

There are different explanations for why gender differences in self-control and impulsivity start to appear at a young age and maintain through one's adult life. Sociocultural theories suggest that gender differences in self-control may be largely attributable to the different gender roles that males and females adopt in a society. For example, according to *gender schema theory* (Bem, 1981), gender roles are organized into schemas, a cognitive structure of gender-associated information that helps guide a person's gender-related behaviors and process others' gendered behaviors. Individuals develop these gender role expectations primarily through social learning including interacting with and observing others, teaching from parents and school, and being exposed to media and the entire socio-cultural environment. When people engage in behaviors that are not "gender-appropriate," they are subject to societal disapproval, rejection, and pressure to alter their behaviors (Bem, 1981).

Power control theory specifically addresses the link between gender roles and self-control/impulsivity (Hagan et al., 1988). According to this theory, gender differences in self-control and impulsivity are likely due to the systemic power disparity that exists in society between men and women. In patriarchal societies, because of men's higher strength, power, and status, they are allowed and encouraged to be bold and impulsive, whereas women are taught and reinforced to be cautious and restrained (e.g., Blackwell & Piquero, 2005; Miller & Burack, 1993). For example, parents tend to exert less restriction and less control on boys and have more tolerance with their impulsive behaviors compared to their parenting with girls (e.g., Chapple & Johnson, 2007). As a result of growing up in a patriarchal society, boys come to view impulsivity as a component of their developing masculine identity, whereas girls view self-control as a defining feature of their femininity. Based on these theories, we expect that gender roles will be able to account for gender differences in self-control and impulsive behaviors.

1.2. Gender Role Traits, Gender Role Attitudes, and Self-Control

It is important to recognize two distinct constructs concerning gender roles: *gender role traits* vs. *gender role attitudes*. Gender role traits refer to gender-specific personality characteristics that are accepted by a given society as appropriate for a typical male or female role (Bem, 1981). For example, a "masculine" person is believed to have personality characteristics such as independent, assertive, tough, forceful, etc., whereas a "feminine" person would be affectionate, sensitive, tender, sympathetic, etc. It is important to note that gender and gender roles, while highly related, are independent identities. An individual, identified as male or female in gender, can be highly masculine, highly feminine, or both masculine and feminine, or neither as a person. Thus these "gendered" traits have been reconceptualized to be separated from gender and renamed as "instrumental" vs. "expressive"

traits, respectively (e.g., Lippa, 2001). In the current study, the terms “trait masculinity” and “trait femininity” are used as a contrast to gender role attitudes.

Gender role attitudes or ideology are people’s beliefs about what constitutes typical roles that men and women should play in a society, including their appearances, interests, and behaviors (Archer, 1989; Constantinople, 1973). For example, a common traditional gender role belief in a patriarchal society would be that men should generate more income than women, whereas women should spend more time with their children than men. Importantly, while it is possible for one’s gender role traits and attitudes to overlap—for example, a highly masculine person believes that women should not take leadership positions, it is also possible for these two constructs to not line up—for example, a very feminine person may believe that men should pull their equal weight in household chores such as laundry and cooking. Thus, gender role traits and gender role attitudes are distinct constructs that capture unique aspects of the broader concept of gender roles (Archer, 1989).

1.2.1. Gender Role Traits and Self-Control

Despite the popularity of the general crime theory, surprisingly no research has explicitly tested whether gender role traits could account for the gender differences in self-control. Nofziger (2010) modeled the relationship between self-control and deviance from a gendered perspective in a sample of predominantly first-year college students. Results replicated the significant gender differences in self-control and deviance, showing that women exhibited greater self-control and less deviance than men. While the study did not test whether gender role traits could explain the gender differences in self-control, it did test how gender role traits accounted for the gender difference in deviance: When gender, trait masculinity and trait femininity, and self-control were all entered to predict deviance, trait masculinity was not a significant predictor, while gender, trait femininity, and self-control significantly predicted deviance, suggesting that trait femininity had a deterring effect on deviance similar to self-control but it could not fully account for the gender effects on deviance.

Several studies examined the links between gender role traits and a variety of impulsive behaviors such as violence, impulsive driving, traffic violations, etc. Their findings indicated that trait masculinity tends to be associated with an increased risk of violent victimization (Daigle & Mummert, 2014) and driver urgency and aggressive anger expression (Öztürk et al., 2021), while femininity is associated with an elevated risk of self-harming (Dollivera & Rockerb, 2018) but also with functional impulsivity and constructive anger expression (Öztürk et al., 2021). Further, trait masculinity and femininity tend to predict impulsive behaviors over and above the effects of gender (Dollivera & Rockerb, 2018; Oppenheim et al., 2016; Öztürk et al., 2021).

Based on power control theory and previous findings, we predict that (a) trait masculinity should be associated with more frequent impulsive behaviors and lesser self-control, and vice versa for trait femininity, and (b) gender role traits

should be able to at least partially account for gender difference in self-control and impulsive behaviors.

1.2.2. Gender Role Attitudes and Self-Control

Much research of gender role attitudes in American literature has focused on hypermasculine (or macho) norms such as being extremely competitive, aggressive, and emotional restrictive (Mosher & Sirkin, 1984; Parent & Moradi, 2009; Wade & Donis, 2007). Hypermasculinity tends to be maladaptive and associated with many negative outcomes including poorer well-being (e.g., Rochlen & Mahalik, 2004) and relationship outcomes (e.g., Burn & Ward, 2005; Helms et al., 2006). While there has not been direct examination on the link between hypermasculine norms and self-control or restraint, some research has studied the role of hypermasculinity and impulsive behaviors. For example, male college students' endorsement of hypermasculine norms was associated with a variety of self-reported impulsive behaviors including drug use, aggression, dangerous driving, and other delinquent behaviors (e.g., Mosher & Sirkin, 1984; Parrot & Zeichner, 2003). Masculine norms such as "being a playboy," "winning," and "risk-taking" tend to be associated with young men's intoxication and drinking-related problems (de Andrade et al., 2023; Iwamoto et al., 2011), suggesting that college men see drinking especially binge drinking as a significant sign of masculinity. Interestingly, the positive association between hypermasculine norms and problematic drinking is not only evident in men but also in women. For example, Kaya et al. (2016) focused on the role of traditional feminine and masculine norms in college women's alcohol use. Their findings showed that women's endorsement of the masculine norms of risk-taking and emotional control was associated with increased heavy episodic drinking.

In light of the extant masculinity literature dominated by research on the traditional hypermasculine role, there have been efforts to extend the conceptualization of masculinity from a primarily negative view to a more balanced view with positive masculine roles included (e.g., Clay, 2012; Connor et al., 2021; Kilmartin et al., 2013; Kiselica et al., 2016). For example, Kiselica et al. (2016) defined positive masculinity as "prosocial attitudes, beliefs, and behaviors of boys and men that produce positive consequences for self and others" (pp. 126). Examples of positive masculine roles include instrumental relationships, caring and providing for loved ones, generative fatherhood, respect for women, male courage, group orientation, etc. (Kiselica et al., 2016). Arciniega et al. (2008) developed a measure to assess a two-dimensional model of (Mexican) masculinity: *machismo* (negative masculinity) and *caballerismo* (positive masculinity). Machismo consists of common hypermasculine beliefs endorsing men's dominant, controlling, and aggressive role. For example, "men are superior to women" and "in a family a father's wish is law." Caballerismo consists of beliefs showing a positive side of being masculine such as "men should respect their elders" and "men should be willing to fight to defend their family." Although this measure was originally developed to assess masculinity in Latino culture, this more balanced conceptualization of mas-

culinity has gained increased attention as well as empirical support in the U.S. (Bracic et al., 2018; Kiselica et al., 2016; Wu et al., 2021). Therefore in the current study, we adopted this new approach to conceptualizing and measuring masculine attitudes. Despite its focus on masculinity attitudes, this measure also reflects general gender role attitudes including attitudes towards women due to the inextricable relationship between attitudes regarding male roles and female roles.

Based on power control theory, we predict that people who have adopted machismo (traditional negative masculine roles) would display less self-control and greater impulsive behaviors; for caballerismo (positive masculine roles), we predict that it should have opposite effects compared to machismo; that is, caballerismo should be positively related to self-control but negatively related to impulsive behaviors because these positive masculine roles such as caring and providing for loved ones, stand up for one's belief, and group adherence may require and promote self-control and inhibit impulsivity.

1.3. Current Studies

Although previous research has supplied evidence that both gender role traits and gender role attitudes, particularly traditional hypermasculine attitudes are associated with impulsive behaviors, several questions remain unanswered: First, because hardly any research considered both gender and gender roles in examining self-control/impulsivity, it is unclear whether gender role attitudes and traits could account for the gender difference in self-control and impulsive behaviors. Second, it is unclear whether gender role traits and gender role attitudes would play independent roles in the prediction of self-control and impulsive behaviors.

The current studies were designed to replicate and better clarify the links between gender roles and self-control and impulsive behaviors. In Study 1, gender and gender role traits were used to predict trait self-control and its two subcomponents—impulsivity and restraint as well as an impulsive behavior—snooping on one's romantic partner. In Study 2, we sought to first replicate the findings regarding trait self-control and its components in Study 1. We included a different typical impulsive behavior among college students—drinking. Most importantly, we added gender role attitudes to predict self-control and drinking on top of gender and gender role traits. Our studies aimed to extend previous research in several major ways: First, we used a measure of trait self-control that allows us to examine overall self-control as well as the two separate components of self-control—restraint and impulsivity. We also included two separate impulsive behaviors. Second, we adopted a new conceptualization and measure of masculine role attitudes that contain both positive and negative dimensions of masculine role attitudes. Finally, by including both gender role traits and gender role attitudes, we were able to explore the relative contributions of these two important gender role constructs in the prediction of self-control and impulsive behaviors beyond gender.

2. Study 1

Given the very limited research on gender and gender role traits in relation to self-

control, the primary goals of Study 1 were to (a) test how gender and gender role traits predict self-control and its components—impulsivity and restraint, as well as a specific impulsive behavior—snooping in relationships, and (b) test the replicability of the findings across self-control, restraint, and impulsivity.

Snooping is defined as the covert intrusive behavior of interpersonal curiosity for the discovery of new, previously unknown information about a person through investigating their personal belongings without permission or knowledge (Derby et al., 2012; Litman & Pezzo, 2007). It encompasses actions such as rummaging through clothes, mail, and records, reading text messages or emails, checking social media accounts, or inspecting other belongings of somebody such as a romantic partner, friend, relative, co-worker, and even stranger. Snooping in romantic relationships is a common behavior, particularly in younger generations as two out of every three millennials reported admitted to snooping on their partners (Derby et al., 2012). Females tend to engage in more snooping according to two previous studies (Derby et al., 2012; Vinkers et al., 2011). However, because women also tend to have higher self-control which should reduce snooping, it is possible we may see no gender difference in snooping or an inverse association. Trait masculinity and machismo attitude may promote one's snooping behavior because more traditional masculinity may make one feel more entitled to snoop, while caballerismo may inhibit snooping because attitudes of positive masculinity include respect for the partner. Trait femininity tends to be associated with greater vulnerability and insecurity in a relationship, which may lead to snooping. On the other hand, because trait femininity is also associated with more self-control and less impulsivity, it could counteract snooping. Due to the lack of direct research on the link between gender roles and snooping, we will examine the role of gender role traits in snooping in an exploratory fashion.

Guided by sociocultural theories on gender roles as well as previous research on this topic, we proposed the following three hypotheses:

H1: There will be significant gender differences in self-control as well as its components: restraint and impulsivity. Specifically, men should score lower in self-control (H1a) and restraint (H1b) but higher in impulsivity (H1c) than women do.

H2: Gender role traits will significantly predict self-control as well as its components. Specifically, trait masculinity will be a negative predictor of self-control (H2a) and restraint (H2b) but a positive predictor of impulsivity (H2c), while trait femininity will be a positive predictor of self-control (H2d) and restraint (H2e) but a negative predictor of impulsivity (H2f).

H3: Gender role traits (trait masculinity and femininity) will account for the gender effects on self-control (H3a) and its components—restraint (H3b) and impulsivity (H3c).

2.1. Method

2.1.1. Participants and Procedure

Using the effect size on gender traits and self-control reported in previous re-

search (Nofziger, 2010), we conducted a power analysis in G*Power. Given the lowest reported correlation of -0.154 , alpha level of 0.05, and two-tailed, to achieve a statistical power of 0.90, the required minimum sample size was 439. The current sample included 491 individuals (age: $M = 19.06$, $SD = 1.93$). The majority of participants were female (68%) with the remaining being male (32%). The average age was 19.16 years old ($SD = 2.83$ years). Participants were mostly Caucasian (84.7%), and Christian (70.3%). The vast majority (95.8%) of the sample had completed high school and some college education. Most (96.9%) of the sample reported their yearly income level as \$25,000 or less. Regarding relationship status, the majority reported that they were either not currently romantically involved with anyone, casually dating, separated or divorced (57.6%), with the rest of the sample being either married, engaged, or in a committed relationship (42.4%).

The vast majority of the participants were recruited from the subject pool in the Department of Psychology at a large public university in the southeastern United States while the rest were recruited from various social media outlets. Participants who consented to participate in the study were provided a web link to the online study. They completed a demographic questionnaire and responded to measures of gender role traits, self-control, and snooping as well as other tasks that were not included in the current analysis. Participants from the university received one research credit for their voluntary participation in this study. This study received IRB approval at one of the authors' academic affiliation. All study materials and data are available upon request.

2.1.2. Measures

For **self-control**, Participants responded to the 13-item Brief Self-Control Scale (BSCS, Tangney et al., 2004). They rated the degree to which each item was typical of themselves with a 5-point scale ranging from 1 = "not at all" to 5 = "very much." In addition to yielding a score on general self-control by averaging all 13 items, BSCS also contains two subscales (see Maloney et al., 2012). The impulsivity subscale has four items. Sample items are "I do certain things that are bad for me, if they are fun." The restraint subscale has 4 items. Sample items are "I am good at resisting temptation." The Cronbach alpha reliability for the study sample was 0.83 for self-control (the total scale), 0.73 for impulsivity, and 0.67 for restraint, respectively.

Gender role traits were assessed by the 16-item short-form Bem Sex Role Inventory (Zhang et al., 2001). Eight items assess masculinity such as "independent" and "assertive," and another eight items assess femininity including "affectionate" and "sympathetic." Participants used a 5-point scale (ranging from *strongly disagree* to *strongly agree*) to indicate how each item was descriptive of themselves. The Cronbach alpha reliability for the study sample was 0.78 for masculinity and 0.89 for femininity.

To measure the frequency of **snooping** behaviors, we compiled a list of 20 common snooping behaviors such as snooped/looked through the partner's email,

texts, cell phone, Facebook, computer, clothes, wallet, drawers, documents, diary, etc. We asked participants to indicate “how often you have participated in each of these behaviors without your partner’s permission while you were in your relationship.” Participants responded with the following scale: 1 = Did not participate in this behavior because you didn’t want to. 2 = Did not participate in this behavior because there was no opportunity. 3 = Have participated in this behavior only once. 4 = Have participated in this behavior more than once. We computed the overall frequency of snooping by averaging all 20 snooping behaviors.

2.2. Results

2.2.1. Gender Differences

We first examined gender differences in self-control, impulsivity, restraint, trait masculinity, trait femininity, and snooping. Independent *t*-tests were performed to test these gender differences. Descriptive and *t*-test statistics results are presented in **Table 1**.

Table 1. Descriptive statistics of key variables by gender and tests for gender differences.

	Male		Female		<i>t</i>	<i>p</i>	Cohen’s <i>d</i>
	Mean	SD	Mean	SD			
Study 1							
Self-control	3.035	0.534	3.230	0.548	-3.694***	<0.001	-0.359
Impulsivity	2.975	0.709	2.634	0.729	4.838***	<0.001	0.471
Restraint	2.963	0.673	2.982	0.691	-0.283	0.777	-0.028
Trait masculinity	3.506	0.542	3.355	0.642	2.521*	0.012	0.247
Trait femininity	3.613	0.626	3.919	0.674	-4.745***	<0.001	-0.465
Snooping	1.717	0.540	1.602	0.512	2.265*	0.012	0.220
Study 2							
Self-control	3.086	0.601	3.240	0.652	-2.348*	0.019	-0.241
Impulsivity	2.779	0.763	2.513	0.878	3.155**	0.002	0.317
Restraint	2.930	0.730	2.915	0.795	0.199	0.843	0.020
Trait masculinity	3.457	0.602	3.394	0.575	1.068	0.286	0.107
Trait femininity	3.874	0.594	4.130	0.610	-4.212***	<0.001	-0.423
Machismo	1.982	0.648	1.520	0.499	8.324***	<0.001	0.835
Caballerismo	4.412	0.467	4.314	0.510	1.967*	0.050	0.197
Drinking	10.135	7.901	8.212	6.411	2.764**	<0.010	0.277

Note. *N* = 473 - 482 for Study 1. *N* = 433 - 450 for Study 2. **p* < 0.05, ***p* < 0.01, ****p* < 0.001.

Significant gender differences were found on all variables except for restraint. Specifically, these results showed that on average, women scored significantly higher on self-control but lower on impulsivity than men did. Additionally, women scored significantly lower than men on trait masculinity and higher on

trait femininity. Finally, men engaged in more frequent snooping than women reported. These gender differences ranged from small to medium in effect size.

2.2.2. Intercorrelations between Self-Control Variables and Gender Role Traits

Table 2 presents the zero-order intercorrelations (Pearson correlation) among all key variables in this study: self-control, impulsivity, restraint, trait masculinity, trait femininity, and snooping. These correlations showed several general patterns. First, self-control showed a high correlation with impulsivity and restraint. This is not surprising because self-control contains both impulsivity and restraint items. The size of the correlation between impulsivity and restraint (above 0.50) indicated that while these two constructs are closely related, they are nevertheless non-redundant with each other. Second, trait masculinity and trait femininity were independent from each other given the statistically insignificant correlation between them. Third, in terms of the associations between self-control variables and gender role traits, they were largely unrelated with only one exception—trait masculinity and impulsivity were significantly positively correlated, suggesting more masculine individuals tend to be more impulsive. Finally, snooping was negatively associated with self-control and trait femininity but positively associated with impulsivity and masculinity. Interestingly, it was not significantly correlated with restraint. It is important to note that all of the correlations, with the exception of the intercorrelations among self-control and its two components, were relatively small in magnitude ($r_s < 0.20$).

Table 2. Intercorrelations among key variables.

	Trait						
	Self-control	Impulsivity	Restraint	Masculinity	Femininity	Machismo	Caballerismo
Study 1							
Impulsivity	−0.855***						
Restraint	0.819***	−0.538***					
Trait masculinity	−0.074	0.159***	0.034				
Trait femininity	0.050	−0.036	−0.011	−0.038			
Snooping	−0.132**	0.168**	−0.064	0.115*	−0.095*		
Study 2							
Impulsivity	−0.880***						
Restraint	0.802***	−0.563***					
Trait masculinity	−0.045	0.133**	0.077				
Trait femininity	0.158***	−0.118*	0.126**	0.197***			
Machismo	−0.152**	0.175**	−0.076	0.131**	−0.185***		
Caballerismo	0.104*	−0.035	0.105*	0.131**	0.246***	0.280***	
Drinking	−0.324***	0.372***	−0.184***	0.175***	−0.073	0.115***	0.003

Note. $N = 473 - 482$ for Study 1. $N = 450 - 451$ for Study 2. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

2.2.3. Predicting Self-Control, Impulsivity, and Snooping from Gender and Gender Role Traits

Next, we conducted three sets of hierarchical regressions to test whether gender role traits could account for the gender difference in self-control (Set 1), impulsivity (Set 2), and snooping (Set 3). We did not perform this analysis on restraint as the t-test indicated no significant gender difference in restraint. Specifically, to test our hypotheses, each set of regressions includes two regressions: In Model 1, gender was entered as the predictor of self-control, impulsivity, or snooping. In Model 2, trait masculinity and femininity were entered into the regression equation in addition to gender to predict self-control, impulsivity, or snooping. We focus on results of Model 2 here because results of Model 1 (i.e., gender effects) are identical to the t-tests reported earlier. Model 1 is included in order to compare to Model 2. Standardized regression coefficients (Betas) of all predictors as well as R^2 s are presented in **Table 3**.

Table 3. Standardized regression coefficients predicting self-control, impulsivity, and snooping (Study 1).

	Self-control		Impulsivity		Snooping	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Gender	-0.158***	-0.148***	0.208***	0.194***	0.107*	0.079
Trait masculinity		-0.057		0.137**		0.103*
Trait femininity		0.016		0.010		-0.075
R^2	0.025***	0.028***	0.043***	0.062***	0.011*	0.027**

Note. $N = 474$. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

For self-control, when trait masculinity and femininity were added to the regression equation in Model 2, gender remained a statistically significant predictor of self-control while neither trait masculinity nor femininity was a significant predictor. The R^2 gained in Model 2 (0.003) was not significant. These results suggested that gender role traits did not account for any of the gender difference observed in self-control.

For impulsivity, when trait masculinity and femininity were added to the regression equation in Model 2, gender remained a statistically significant predictor of impulsivity although its regression coefficient did reduce in size compared to Model 1. Trait masculinity was a significant, positive predictor of impulsivity whereas trait femininity was not. The R^2 gain (0.019) in Model 2 was significant. These results suggested that trait masculinity was able to partially account for this gender difference whereas trait femininity did not account for any of the gender difference observed in impulsivity.

For snooping, when trait masculinity and femininity were added to the regression equation in Model 2, gender was no longer a statistically significant predictor of snooping. Trait masculinity was a significant, positive predictor of impulsivity whereas trait femininity was not a statistically significant predictor. The R^2 gain

(0.016) in Model 2 was significant. These results suggested that (a) there was a weak but statistically significant gender difference in snooping and (b) trait masculinity was able to completely account for this gender difference. Trait femininity could not account for any of the gender difference observed in snooping.

2.3. Discussion

The primary goal of Study 1 was to examine the links between gender, gender role traits, and self-control as well as snooping behavior. There are several major findings: First, significant gender differences were observed in self-control and impulsivity, but not in restraint. The significant gender differences were consistent with the literature—namely, women reported significantly higher self-control and lower impulsivity than men did (e.g., [Chapple & Johnson, 2007](#)). There was also a significant gender difference in snooping such that men reported higher frequency of snooping behavior than women did, contrary to the common stereotype and previous findings suggesting that women are more likely to engage in snooping. Second, overall, gender role traits did not appear to have strong associations with self-control and its components. In particular, trait femininity did not show significant correlation with any of the self-control variables, which was inconsistent with [Nofziger's \(2010\)](#) finding. Third, trait masculinity partially accounted for the gender difference in impulsivity and completely accounted for the gender difference in snooping, suggesting that an important reason that men were more impulsive and snooped more compared to women was because of their stronger masculine personality. One limitation of the snooping measure, however, is that no relationship type was specified. Relationship type (e.g., short-term vs. long-term) may play a role in whether one would snoop over the partner.

3. Study 2

The primary goals of Study 2 were to fill the gap in the literature by including gender role attitudes in addition to gender role traits and testing their contributions in accounting for the gender difference in self-control. To increase the replicability and robustness of the findings, we examined a different impulsive behavior—drinking on college campus. There has been substantial evidence showing that college students' drinking is a risky behavior associated with many negative consequences such as decreased cognitive functioning, decreased academic functioning, regretted sexual experiences, and relationship difficulties, blackouts, and physical violence ([Martinez et al., 2014](#); [National Institute on Alcohol Abuse and Alcoholism, 2004](#)). Additionally, men tend to drink more heavily and more often than women (e.g., [Lemle & Mishkind, 1989](#); [Rahav et al., 2006](#); [Van Gundy et al., 2005](#)). Masculine norms such as “risk-taking” and “winning” appear to be associated with young men's intoxication and drinking-related problems ([de Andrade et al., 2023](#); [Iwamoto et al., 2011](#)) as well as young women's problematic drinking ([Kaya et al., 2016](#)). We propose three new hypotheses in addition to testing H1, H2, and H3 from Study 1:

H4: Gender role attitudes will significantly predict self-control as well as its components and drinking. Specifically, machismo will be a negative predictor of self-control (H4a) and restraint (H4b) but a positive predictor of impulsivity (H4c) and drinking (H4d). Caballerismo will be a positive predictor of self-control (H4e) and restraint (H4f) but a negative predictor of impulsivity (H4g) and drinking (H4h).

H5: Gender role attitudes (machismo and caballerismo) will account for the gender effects on self-control (H5a) as well as its components—restraint (H5b) and impulsivity (H5c), and drinking (H5d).

H6: Gender role traits and gender role attitudes will independently account for the gender effects in self-control (H6a) as well as its components—restraint (H6b) and impulsivity (H6c), and drinking (H6d).

3.1. Method

3.1.1. Participants and Procedure

Participants were 463 undergraduate students from the Department of Psychology research pool at a large, public southeastern university in the United States. Most participants were female (66.3%), Caucasian (84.8%), Christian (70.2%), and heterosexual (76.6%). The mean age of participants was 19.03 ($SD = 1.80$). Since there has not been research on machismo, caballerismo, and self-control variables, we collected as much data as convenience allowed for (i.e., over two full semesters). We conducted a post hoc power analysis. The results indicated that given the sample size $n = 463$, the current sample achieved an excellent power of 0.99 to detect a correlation as small as 0.20.

As in Study 1, the participants were recruited from the subject pool in the Department of Psychology at a large southeastern public university in the United States. Participants who consented to participate in the study were provided a web link to the online study. They completed a demographic questionnaire and responded to measures of gender role traits, self-control, and drinking as well as other tasks that were not included in the current analysis. Participants received one research credit for their voluntary participation in this study. This study received IRB approval at one of the authors' academic affiliation. All study materials and data are available upon request.

3.1.2. Measures

Participants completed the same Demographics Questionnaire, Brief Self-Control Scale, Gender Role Traits as in Study 1. The Cronbach alpha reliability for the current sample was 0.83 for self-control, 0.74 for impulsivity, 0.64 for restraint, 0.75 for trait masculinity, and 0.86 for trait femininity.

Traditional Masculine Attitudes was assessed by the Traditional Machismo and Caballerismo Scale developed by Arciniega et al., 2008. In this measure, traditional masculinity is theorized to have two components: negative masculine role (*machismo*), which reflects primarily a view of hypermasculinity, and positive masculine role (*caballerismo*), which has a focus on family connectedness. The

Traditional Machismo and Caballerismo Scale is a 20-item scale, with 10 items assessing machismo (sample item: “*Men are superior to women*”) and the other 10 items assessing caballerismo (sample item: “*Men should respect their elders*”). Items are rated on a 5-point scale from *strongly disagree* to *strongly agree*. The Cronbach alpha reliability was 0.82 for machismo (negative masculine role) and 0.78 for caballerismo (positive masculine role). Although this measure was developed to assess masculine ideology in Mexican culture, it has been used in multiple U.S. samples and the results showed that it captures Americans’ masculine attitudes as well (Bracic et al., 2018; Wu et al., 2021).

Drinking Behavior was assessed by two items. The first one measured drinking frequency: “How often do you have a drink containing alcohol?” Participants responded with a 6-point scale: 1 = *Never*, 2 = *Only social drinking (i.e., around people)*, 3 = *Monthly or less*, 4 = *Two or four times a month*, 5 = *Two to three times a week*, 6 = *Four or more times a week*. The second item measured drinking intensity: “How many drinks containing alcohol do you have on a typical day when you are drinking?” Participants were provided a definition for a drink: “A standard drink would be a 12 fl oz. of beer (about 1 can of beer), 9 fl oz. of malt liquor, 5 fl oz. of wine (glass of wine), and 1.5 fl oz. distilled liquors (1.5 shot of gin, rum, tequila, vodka, whiskey, etc.” Participants responded with a 5-point scale: 1 = *1 or 2*, 2 = *3 or 4*, 3 = *5 or 6*, 4 = *7 to 9*, 5 = *10 or more*. We combined these two items by multiplying them together such that this composite would best capture the individual differences in drinking behavior.

3.2. Results

3.2.1. Gender Differences

We first examined gender differences in all key variables with independent *t*-tests. Descriptive and *t*-test statistics results are presented in **Table 1**. Significant gender differences were found on self-control, impulsivity, trait femininity, machismo and caballerismo, and drinking. Specifically, these results showed that on average, men scored significantly higher on impulsivity and lower on self-control and trait femininity than women did, which replicated the findings from Study 1. Additionally, men reported significantly stronger endorsement of machismo (large effect) and caballerismo (small effect) compared to women. Men also reported a higher rate of drinking than women (small effect). Finally, the gender differences in restraint and trait masculinity were not statistically significant.

3.2.2. Intercorrelations between Self-Control Variables, Gender Role Traits, and Gender Role Attitudes

Table 2 presents the zero-order intercorrelations among all key variables in this study. As in Study 1, self-control was strongly associated with impulsivity and restraint. The correlation between impulsivity and restraint was similar in size to that in Study 1, confirming that they are closely related but nevertheless non-redundant constructs. However, trait masculinity and trait femininity were positively correlated. Machismo and caballerismo were positively associated, which

was expected as they both are components of traditional masculine role attitudes. In terms of the associations between gender role traits and attitudes, trait masculinity was positively correlated with both machismo and caballerismo, whereas trait femininity was negatively correlated with machismo but positively correlated with caballerismo. In terms of the associations between self-control variables and gender role traits and attitudes, trait masculinity was positively related to impulsivity which replicated the Study 1 finding. Trait femininity was positively associated with self-control and restraint but negatively associated with impulsivity. Machismo had a negative correlation with self-control and a positive correlation with impulsivity, whereas caballerismo had a weak positive correlation with both self-control and restraint. Finally, drinking had positive correlations with impulsivity, trait masculinity, and machismo, and negative correlations with self-control and restraint.

3.2.3. Predicting Self-Control, Impulsivity, and Drinking from Gender, Gender Role Traits, and Gender Role Attitudes

Next, we conducted another three sets of hierarchical regressions to test whether gender role traits and attitudes can account for the gender difference in self-control (Set 1), impulsivity (Set 2), and drinking (Set 3). As in Study 1, we did not perform this analysis on restraint as the t-test indicated no significant gender difference in restraint. Specifically, each set of regressions includes four regressions: In Model 1, gender was entered as the predictor of self-control, impulsivity, and drinking. Again this was identical to the t-tests testing for gender differences. In Model 2, two separate regressions were conducted. In Model 2A, trait masculinity and femininity were entered into the regression equation in addition to gender to predict self-control, impulsivity, and drinking. In Model 2B, machismo and caballerismo were entered into the regression equation in addition to gender as predictors. In Model 3, trait masculinity and femininity as well as machismo and caballerismo were entered into the regression equation in addition to gender to predict self-control, impulsivity, and drinking. Standardized regression coefficients (Betas) of all predictors as well as R^2 s are presented in **Table 4**.

For self-control, when trait masculinity and femininity were added to the regression equation in Model 2A, gender was no longer a significant predictor of self-control while trait femininity was a significant, positive predictor. The R^2 gained in Model 2A (0.023) was statistically significant. When machismo and caballerismo were added to the regression equation in Model 2B, gender was no longer a significant predictor of self-control while both masculine attitudes were significant predictors. The R^2 gained in Model 2B (0.037) was statistically significant. Finally in Model 3 where trait masculinity and femininity as well as machismo and caballerismo were entered to the regression equation in addition to gender, gender was no longer a significant predictor of self-control and neither was trait masculinity or trait femininity, whereas both machismo and caballerismo remained significant predictors of self-control. The R^2 gained in Model 3 (0.047) was statistically significant. These results suggested that the significant gender dif-

ference in self-control was completely accounted for by gender role attitudes, but not by gender role traits.

For impulsivity, when trait masculinity and femininity were added to the regression equation in Model 2A, gender remained a statistically significant predictor of impulsivity although its regression coefficient did reduce in size compared to Model 1. Both trait masculinity and femininity significantly predicted impulsivity, with higher masculinity and lower femininity associated with greater impulsivity. The R^2 gained in Model 2A (0.030) was statistically significant. When machismo and caballerismo were added to the regression equation in Model 2B, gender was no longer a significant predictor of self-control and neither was caballerismo, while machismo was a significant, positive predictor. The R^2 gained at Model 2B (0.024) was statistically significant. Finally in Model 3 where trait masculinity and femininity as well as machismo and caballerismo were entered to the regression equation in addition to gender, gender was no longer a significant predictor and neither trait femininity nor caballerismo, whereas trait masculinity and machismo remained significant, positive predictors of impulsivity, suggesting that higher scores of trait masculinity and machismo were associated with higher impulsivity. The R^2 gained at Model 3 (0.045) was statistically significant. These results suggested that the significant gender difference in self-control was completely accounted for by trait masculinity and machismo.

For drinking, when trait masculinity and femininity were added to the regression equation in Model 2A, gender continued to be a significant predictor of drinking although its regression coefficient did reduce in size compared to Model 1, while trait masculinity was a significant, positive predictor. The R^2 gained in Model 2A (0.037) was statistically significant. When machismo and caballerismo were added to the regression equation in Model 2B, gender continued to be a significant predictor of drinking although its regression coefficient did reduce in size compared to Model 1, while neither machismo nor caballerismo were significant predictors. The R^2 gained in Model 2B (0.005) was not statistically significant. Finally in Model 3 where trait masculinity and femininity as well as machismo and caballerismo were entered to the regression equation in addition to gender, gender was no longer a significant predictor of self-control and trait masculinity was the only significant predictor of drinking. The R^2 gained in Model 3 (0.038) was statistically significant. Note that although drinking was not normally distributed, regressions are highly robust to non-normal distributions with large sample size ($n > 200$). To be cautious, we also conducted Gamma regressions with log link function which is suitable for non-normal continuous data. The results of Gamma regressions nicely replicated what we have seen in the hierarchical linear regressions. These results suggested that the significant gender difference in drinking was completely due to trait masculinity but not due to the other gender role variables.

3.3. Discussion

In Study 2, we examined to what degree gender role traits and attitudes were able

to account for the gender differences in self-control, restraint, impulsivity, and drinking, if any. Several main findings were observed. First, we were able to replicate the significant gender differences in self-control and impulsivity found in Study 1 such that women were significantly more self-controlled and less impulsive compared to men. Also as in Study 1, men and women did not differ significantly on restraint.

Table 4. Standardized regression coefficients predicting self-control, impulsivity, and drinking (Study 2).

	Model 1	Model 2A	Model 2B	Model 3
<i>Self-control</i>				
Gender	-0.116*	-0.082	-0.068	-0.054
Trait masculinity		-0.072		-0.061
Trait femininity		0.155**		0.100
Machismo			-0.172***	-0.144**
Caballerismo			0.159***	0.133**
R^2	0.014*	0.037***	0.051***	0.061***
<i>Impulsivity</i>				
Gender	0.147**	0.115*	0.095	0.082
Trait masculinity		0.151***		0.138**
Trait femininity		-0.126**		-0.087
Machismo			0.166***	0.132*
Caballerismo			-0.090	-0.076
R^2	0.022**	0.052***	0.046***	0.067***
<i>Drinking</i>				
Gender	0.129**	0.103*	0.102*	0.090
Trait masculinity		0.192***		0.186***
Trait femininity		-0.085		-0.079
Machismo			0.077	0.040
Caballerismo			-0.004	0.002
R^2	0.017**	0.054***	0.022***	0.055***

Note. $N = 450$. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Second, gender role traits showed stronger associations with self-control and impulsivity than in Study 1, particularly trait femininity. Specifically, femininity was positively correlated with self-control and restraint and negatively correlated with impulsivity, which was in line with Nofziger's (2010) finding regarding femininity. Masculinity had a significant positive association with impulsivity which replicated the same finding in Study 1.

Third, overall, gender role attitudes had significant correlations with self-con-

trol variables although the magnitude tended to be small. Machismo (negative masculine attitudes) was negatively associated with self-control and positively with impulsivity, whereas caballerismo was positively associated with self-control and restraint.

Finally, the regression results indicated that machismo and caballerismo fully accounted for the gender difference in self-control, whereas the two gender role traits were no longer significant predictors of self-control once the gender role attitudes were added, suggesting gender role attitudes were more important to the prediction of self-control than gender role traits. Trait masculinity and machismo fully accounted for the gender difference in impulsivity. Trait masculinity was a robust predictor of impulsivity, which replicated the finding in Study 1. Trait masculinity also fully accounted for the gender difference in drinking, which replicated Study 1's finding that trait masculinity fully accounted for the gender difference in snooping. These results strongly suggest that gender roles are a key factor behind gender differences in self-control related traits and behaviors.

4. General Discussion

Although gender differences in self-control and impulsivity have been well established and gender roles have been suggested to be a potential explanation for this gender difference, only limited research has examined how gender roles are related to gender differences in self-control and impulsivity. We conducted two studies to better clarify how gender and gender roles are associated with self-control/impulsivity as a trait and as a behavior. Across two studies, we found that (1) there was a solid, replicable gender difference in impulsivity and a lesser gender difference in self-control but no significant gender difference in restraint; (2) gender role attitudes but not gender role traits were able to account for the gender difference in self-control; (3) masculine roles, particularly trait masculinity, but not femininity, played a more important role in accounting for the gender difference in impulsivity; (4) trait masculinity fully accounted for the gender differences in impulsive behaviors such as snooping and drinking.

4.1. Gender Differences in Self-Control, Impulsivity, and Restraint

We found replicated evidence across the two studies for solid gender differences in impulsivity and lesser in self-control but no significant gender difference in restraint. The gender difference in self-control was highly consistent with previous findings (e.g., [Chapple & Johnson, 2007](#)) and general crime theory ([Gottfredson & Hirsch, 1990](#)). The gender difference in impulsivity replicated and extended previous research because previous studies on gender differences in impulsivity primarily focused on impulsive behaviors rather than impulsivity at the trait level. The lack of gender difference in restraint was new, unexpected, and intriguing given the fact that restraint was a subscale of the self-control measure in the current studies. Despite the considerable conceptual and statistical overlap between restraint, impulsivity, and overall self-control, our findings indicate that they nev-

ertheless capture unique aspects of self-control and have meaningful, differential associations with gender and gender roles. This is consistent with Maloney et al.'s (2012) psychometric analysis indicating that impulsivity and restraint are two distinct factors of self-control, with impulsivity emphasizing the effortless tendency to act on urges whereas restraint representing effortful control of one's behaviors. Conceptually, while impulsivity and restraint may seem to work against each other, impulses may operate despite the overriding power of restraint. To put it in simple words, it is possible for someone to be generally well-controlled but also feel impulsive or engage in impulsive behaviors at times. Maloney et al. (2012) also reported that impulsivity and restraint had differential relationships with other constructs. For example, while only impulsivity was positively associated with counterproductive work behaviors, only restraint was negatively associated with emotional exhaustion.

Our current finding suggested that the gender difference in self-control may be largely restricted to impulsivity and not attributable to restraint. In other words, men's lower self-control appears to primarily reflect the fact that they simply have a much stronger tendency to be impulsive rather than a lesser ability to restrain themselves. This is largely consistent with Cross et al.'s (2011) meta-analysis on sex difference in impulsivity suggesting that men are significantly higher in sensation-seeking and risk-taking than women, but the sex difference in effortful or executive control is minimal. This calls for future research to replicate this finding in more diverse samples with alternative measures of self-control and impulsivity. If replicated, this finding should have important implications for interventions—the key to improving self-control may lie more in addressing impulsivity rather than restraint.

4.2. Could Gender Role Traits and Attitudes Account for the Gender Difference in Self-Control?

While several studies have tested gender difference in self-control, few studies have examined it from the perspective of gender roles. The current studies included gender role traits (Studies 1 and 2) and gender role attitudes (Study 2) along with gender to predict self-control. The findings of the two studies suggested that gender role traits had a negligible role in self-control, whereas gender role attitudes played a significant role and were able to fully account for the gender difference in self-control. This finding provided good support for the sociocultural theories of gender roles such as sex role theory (e.g., Bem, 1981; Eagly & Wood, 2012) and power control theory (Hagan et al., 1988). In particular, our finding suggested that an important reason that men tend to have lower self-control than women is that men identify more strongly with the negative traditional masculine role norms. On the other hand, our findings suggest that people who endorse *caballerismo*, the positive aspects of traditional masculine roles (e.g., believing men stand up for their family), tend to display better self-control. This finding that *machismo* and *caballerismo* showed differential, in fact, opposite as-

sociations with self-control underscores the importance of conceptualizing and examining traditional masculinity and gender roles in a comprehensive, balanced manner. The finding that our gender attitudes play a bigger role in self-control than gender or gendered traits has important implications for the development of self-control. As attitudes are generally considered more malleable than personality traits and are more subject to changes through many channels such as media, modeling, and education, it will be interesting to see how gender differences in self-control evolve as the society becomes more egalitarian in gender roles.

It is important to note that when only gender and gender role traits were included, our finding (only in Study 2) was consistent with Nofziger's (2010) indicating that trait femininity may be particularly useful in promoting self-control. However, our findings were able to extend Nofziger's finding by highlighting the greater role that gender role attitudes played in self-control than gender role traits. Once gender role attitudes were added, gender role traits were no longer significant predictors of self-control, which highlights the importance of considering both gender role traits and attitudes in the research of gender roles.

4.3. Could Gender Role Traits and Attitudes Account for the Gender Differences in Impulsivity and Impulsive Behaviors?

Previous studies on impulsivity primarily examined specific impulsive behaviors such as reckless driving, drinking, substance abuse, and gambling. These studies showed consistent gender differences in impulsive behaviors such that men tend to engage in more impulsive behaviors than women (e.g., Stoltenberg et al., 2008; Tetering et al., 2020; Weafer & de Wet, 2014). The current study was able to replicate this gender difference in trait impulsivity as well as in both impulsive behaviors—snooping and drinking. Although the gender difference we observed in snooping was different from previous findings (Derby et al., 2012; Vinkers et al., 2011), it is well established that men can sometimes be more jealous than women, especially when triggered by suspicions of sexual infidelity (e.g., Buss, 2018; Scelza et al., 2020). Given that our studies showed consistent gender differences in trait impulsivity across two separate studies and across two separate impulsive behaviors, we believe it was a robust general finding that men were more impulsive than women.

Importantly, the current research was able to address the gap in the literature that no study has considered the relative roles of gender role traits and attitudes in explaining gender differences in impulsivity and impulsive behaviors. Our findings indicated that the masculine role appears to be particularly important in the prediction of impulsivity and impulsive behaviors: Trait masculinity and machismo fully accounted for the gender difference observed in impulsivity. For the two impulsive behaviors, trait masculinity alone fully accounted for the gender difference in snooping and drinking. By comparison, trait femininity and caballerismo played little role in explaining the gender difference in impulsivity or either of the two impulsive behaviors.

Taken together, these findings highlight the importance of traditional masculine characteristics and attitudes to impulsivity and impulsive behaviors. A more masculine person in either personality or ideology, whether male or female, is more likely to be higher in impulsivity compared to someone who is feminine or identifies with more progressive or egalitarian gender roles. Trait masculinity is particularly relevant to the prediction of specific impulsive behaviors. Trait femininity did not have any unique effect on the prediction of impulsivity and the two impulsive behaviors over and beyond masculine trait and attitudes, suggesting that being feminine does not necessarily increase or decrease one's impulsivity, snooping, and drinking. This finding was at odds with previous research indicating that trait femininity was more important than trait masculinity in predicting deviance (Nofziger, 2010) and dysfunctional impulsive driving behaviors (Öztürk et al., 2021). There are two possible reasons for this discrepancy. First, these two studies did not consider gender role attitudes. Second, it is possible that different impulsive behaviors such as snooping, binge drinking, reckless driving, stealing, and drug abuse may each have their unique connections with masculinity and femininity.

Additionally, *caballerismo* did not appear to be a good predictor of impulsivity and drinking. Recall that *caballerismo* did have a robust positive association with self-control. While both negative and positive aspects of masculine role attitudes contributed to self-control, only the negative (hyper)masculine (*machismo*) attitudes but not the positive masculine role (*caballerismo*) significantly predicted impulsivity. This finding once again suggests that (a) self-control and impulsivity are not simple opposite constructs and (b) *machismo* and *caballerismo* play different roles in different aspects of self-control.

For drinking behavior, trait masculinity completely accounted for the gender difference in drinking and was the only significant gender role predictor beyond gender. Thus, a key reason that men drank more than women is their higher score in trait masculinity. Hypermasculine attitudes did not explain this gender difference in drinking, which was inconsistent with previous findings showing masculine norms such as risk-taking have strong links to drinking-related problems (e.g., de Andrade et al., 2023; Iwamoto et al., 2011; Kaya et al., 2016). Note that all of the previous studies only considered masculine norms instead of both gender role traits and attitudes. It would be very important for future research to consider both gender role traits and attitudes in this line of research.

Interestingly, the current studies suggested that femininity did not play a strong role in accounting for the gender difference in self-control, impulsivity, and either impulsive behavior. This may be partly due to the fact that for gender role attitudes, we only assessed masculine role attitudes. However, we did include both trait masculinity and femininity in both studies. Trait femininity failed to predict any of the outcomes when considered together with gender, trait masculinity, and masculine role attitudes, while trait masculinity consistently remained a significant predictor of impulsivity and the two impulsive behaviors, suggesting that im-

pulsivity and related behaviors are particularly responsive to trait masculinity but not trait femininity. This sheds interesting light on the sociocultural perspective of the development of impulsivity. Our findings suggest that individuals' gender role identification, namely masculinity and femininity identification, does not exert equal influences on their personality and behaviors. According to these findings, the embodiment of traditional masculine or instrumental traits is important to the prediction of impulsivity and particularly impulsive behavior. In contrast, whether a person is impulsive in nature or engages in impulsive behaviors has little to do with their feminine or expressive traits. In other words, impulsivity is more about being masculine than being not feminine. Thus, impulsivity may be a key component in the concept of masculinity but not a critical feature in the concept of femininity. This finding by no means should be interpreted to indicate that femininity is not important to the understanding of self-control, impulsivity, and impulsive behaviors, but rather suggests that the roles that masculinity and femininity play in self-control related constructs and behaviors are likely to be different and complex. Future research needs to dive deeper in order to obtain a more nuanced, dynamic, and comprehensive understanding of the link between gender roles and impulsivity.

4.4. Limitations and Future Directions

There were a few limitations to this study. First, we excluded participants who did not identify as either male or female from analyses due to the low rate of individuals who identified as other than male or female. However, it is important to explore gender role trait and attitudes in relation to self-control and impulsivity among trans. and non-binary individuals. Second, impulsivity and restraint were conceptualized and assessed as components of self-control. While it is fascinating that our results indicated that they are relatively distinct constructs despite the necessary conceptual and methodological overlap between them, it would be useful to examine them using independent assessments. Third, the current study did not include measures specifically targeting feminine role attitudes. While traditional masculine role attitudes have strong associations with traditional feminine role attitudes, it would be beneficial to examine whether modern feminism ideology would play any unique role in predicting self-control and impulsivity. Finally, our data were collected at a public university in the southeast U.S. The traditional "southern" culture might have had an influence on the results (e.g., Viki et al., 2003). Future studies could seek to replicate the findings in other regions of the United States and other parts of the world. Relatedly, this study used a convenience college sample, with the majority being young Caucasian female participants. It would be important to expand this research in samples of greater diversity in age, race and ethnicity, SES, religious beliefs, etc.

5. Conclusion

Despite the limitations, the current study was the first to include gender role traits

and attitudes together in the examination of gender difference in self-control and its two sub-components—impulsivity and restraint, as well as two separate impulsive behaviors—snooping and drinking. Overall, the two studies showed that while self-control, impulsivity and restraint were conceptually and operationally overlapped, there was a strong gender difference in impulsivity and a lesser one in self-control but no significant gender difference in restraint. Furthermore, gender role attitudes, but not gender role traits, fully accounted for the gender difference in self-control, whereas masculine gender role (trait and attitude) accounted for the gender difference in impulsivity. Trait masculinity alone fully accounted for the gender differences observed in snooping and drinking. These findings generally support the sociocultural perspective that gender role attitudes and traits may underlie the gender differences in trait self-control and impulsivity as well as impulsive behaviors.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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